TABLE 1.—LOCALITY RECORDS (PARATYPES)

Station no. (H.S. Ladd)	Locality (all Texas)	Depth (feet)	Bottom	U.S.N.M. No.	Number of specimens
2	2 miles northeast of Austwell, head of Hynes Bay	2–2.5	Soft mud	596724	150±
3	3½ miles east of Austwell, Hynes Bay	3.5–4	Mud, sand, and shell	596725	200±
4	2 miles west of Seadrift, San Antonio Bay	2	Sand	596729	2
6	1½ miles north of Webb Point, San Antonio Bay	1.5	Muddy sand	596723 (type)	200±
20	South side of mouth of Copano Bay	3.6	Shell and muddy sand	596730	1
28	Southwest corner of San Antonio Bay	4	Muddy sand and shell	596731	2
39	East-central part of Copano Bay	1.5	Muddy sand and shell	596726	15
48	1½ miles east of Mud Island, Aransas Bay	7	Muddy sand and shell	596727	1
61	North side of main Aransas Pass	1–2	Rock jetty	596728	1

Fisheries, fig. 9, p. 15, 1931). Fresh shells were also dredged at three other localities. Two of these are in Hynes Bay, an arm of San Antonio Bay, at points (stations 2 and 3) where the salinity does not exceed 4 parts per thousand. The third locality where abundant shells were collected is in the exposed part of an oyster reef in Copano Bay (station 39), about 20 miles by airline southwest of the type locality. The salinity at this station may be as high as 19 parts per thousand; though abundant, the shells are not as fresh as those dredged in San Antonio and Hynes Bays.

At the type locality in San Antonio Bay the living snails were dredged from a bottom of muddy sand under 1½ feet of water. Associated with the snails are numerous living specimens of *Rangia cuneata* Gray (with attached barnacles), a few of razor clams (*Ensis minor* Dall), and *Mulinia lateralis* Say; also present are numerous Foraminifera: *Rotalia beccarii* (Linnaeus) was the most abundant, with a few tests of *R. beccarii* var. *tepida* Cushman, *Nonion pauciloculum* Cushman, *Elphidium gunteri* var. *galvestonensis* Kornfeld, and *Miliammina fusca* (Brady).[3] The living faunas at stations 2 and 3, where abundant fresh shells of *Littoridina sphinctostoma* were found, are very similar to the living fauna of the type locality with the addition of ostracodes and numerous specimens of the thin-shelled *Tellina texana* Dall. The bay bottom at stations 2 and 3 is of soft mud under 2 to 3½ feet of water.

One or two shells were dredged from a third locality in Hynes Bay, and from localities in Copano Bay, Aransas Bay, and Aransas Pass. None of these was very fresh and most of them were worn or broken; they appear to have been transported appreciable distances from the place where they lived.

[3] Identifications of Foraminifera by Rita Post, of the U. S. Geological Survey.

ORNITHOLOGY.—*Observations on the genera of the swans.* ALEXANDER WETMORE, Smithsonian Institution.

The white species of swans superficially are so alike that there has been difficulty in the identification and application of the older generic names. It is now accepted that the type of the genus *Cygnus* Bechstein, 1803, is *Anas olor* Gmelin, the mute swan, not *Anas cygnus* Linnaeus, the whooper swan, as stated in the fourth edition of the A.O.U. Check-list.[1] In view of this change it is desirable to review the whole question of generic allocation in these interesting birds. The latest comprehensive treatment of the living swans, that of James L. Peters, to which reference has been made, divides the seven living species between two genera, viz., *Chenopsis* for the black swan of Australia and *Cygnus* for the six remaining forms, of which five are found in the Northern Hemisphere, and one, the black-necked swan, ranges in the southern part of South America.

To outline the discussion, the fourth edition of the A. O. U. Check-list[2] recognized

[1] See PETERS, *Check-list of birds of the world* **1:** 143. 1931; and WITHERBY et al., *Handbook of British birds* **3:** 168. 1939.

[2] *Check-list of North American birds*, ed. **4:** 35. 1931.

Sthenelides as the genus for the introduced mute swan, native in the Old World, found now in a feral state in the lower Hudson Valley and on Long Island, ranging in winter south to the coast of New Jersey and east to Massachusetts. The Twentieth Supplement to the Check-list[3] reduced *Sthenelides* to subgeneric status, thus placing all North American swans in one genus. Hildegarde Howard[4] has reopened this allocation by using *Sthenelides* as a genus for the fossil species named *Cygnus paloregonus* by Cope from the Pleistocene deposits of Fossil Lake, Oreg. (It may be observed that *Chenopis atratus* of Australia seems marked generically from other swans mainly by the shorter tail, which is shorter than the middle toe with claw, and the naked lores in the downy young.)

Externally the species of white swans are so similar that the student of study skins has difficulty in separating them. The comparative anatomist, however, working with skeletons, has no trouble whatever in dividing them into two principal groups on characters so evident that they cannot be disregarded. The differences are most apparent in the form of the trachea, sternum, and furculum. Following is a summary of these anatomical characters, with indication of the allocation of the species of the Northern Hemisphere and South America:

a. Trachea passing directly into thorax, not entering sternum; furculum simple; tail cuneate ..... genus *Cygnus*

Cygnus Bechstein, Orn. Taschenb., pt. 2, 1803: 404. Type, by monotypy, *Anas olor* Gmelin.

Sthenelus Stejneger, Proc. U. S. Nat. Mus. **5:** 184, 185. Aug. 5, 1882. Type, by monotypy, *Anas melancoripha* Molina. (Not *Sthenelus* Marschall, 1873, emendation for *Sthelenus* Buquet, 1860, for a genus of Coleoptera.)

Sthenelides Stejneger, Auk **1** (3): 235. July 1884. Type, by monotypy, *Anas melancorphia* Molina. New name for *Sthenelus* Stejneger (preoccupied).

Euolor Mathews and Iredale, Austr. Avian Rec. **3** (5): 117. Dec. 28, 1917. Type, by original designation, *Anas olor* Gmelin.

Species included:

Cygnus olor (Gmelin) (skeleton examined).

Cygnus melancoriphus (Molina) (skeleton examined).[5]

aa. Trachea making a loop that enters the sternum; furculum especially modified at symphysis to accommodate this loop; tail rounded ..... genus *Olor*

Olor Wagler, Isis, 1832: 1234. Type, by subsequent designation, *Cygnus musicus* Bechstein = *Anas cygnus* Linnaeus (Gray, 1840).

Clangocycnus Oberholser, Emu **8** (pt. 1); 3. July 1, 1908. Type, by monotypy, *Cygnus buccinator* Richardson.

b. Trachea entering anterior end of sternum smoothly, without a dorsal loop. subgenus *Olor*.

Species included:

Olor columbianus (Ord) (skeleton examined).

Olor cygnus (Linnaeus) (skeleton examined).

Olor bewickii Yarrell.[6]

bb. Trachea making a dorsal loop as it enters sternum, protected by a bony case that projects into the anterior end of the body cavity ..... subgenus *Clangocycnus*

Species included:

Olor buccinator (Richardson) (skeleton examined).

The shape of the furculum and the looping of the trachea in the sternal keel are developed in the growing young, the loop lengthening and expanding to the end of the sternum as the individual becomes fully adult. This change with age has led to misunderstanding of the characters by some not familiar with it.

The arrangement of the genera above, it may be noted, is identical with that of Stejneger in his *Outlines of a monograph of the Cygninae*, published in 1882.[7]

In checking over the nomenclature concerned for the species in our list a curious

[3] Auk, 1945: 438.

[4] Carnegie Inst. Washington Publ. 551: 160–165. Jan. 25, 1946.

[5] Also the fossil species *Cygnus paloregonus* Cope. See Howard, Carnegie Inst. Washington Publ. 551: 160–165, Jan. 25, 1946, where *Cygnus matthewi* (Shufeldt) is placed as a synonym of *paloregonus*.

[6] See Yarrell, *History of British birds* **4:** 320–322. 1884–85.

[7] Proc. U. S. Nat. Mus. **5:** 174–221. 1882.

circumstance that does not seem to have been noted in ornithological literature has come to light relative to the generic name proposed by Stejneger for the black-necked swan. Stejneger in 1882 set up the generic name *Sthenelus* with a proper diagnosis of its characters. Apparently then his attention was drawn to Scudder's *Nomenelator zoologieus*, published in the same year where the following citation is found (p. 303): "*Sthenelus* Buq., col. 1859, M." Following this, two years later Stejneger,[8] in a discussion of Scudder's *Nomenclator*, in which he pointed out some of its shortcomings, wrote: "I find that the name *Sthenelus*, which I applied in 1882 to the black-necked swan from South America was preoccupied. It consequently requires a new one, and I propose in future to call the species *Sthenelides melancorypha*."

Mainly through curiosity I checked the earlier use of *Sthenelus* to find that the reference is to Lucien Buquet in his "Mémoire sur deux genres nouveaus de Coléoptères de la famille des Longicornes (*Oxilus* et *Sthelenus*) suivi de la description appartenant aux genres *Platyarthron*, *Oeme* (*Selerocerus* Dej.), *Clytus*, *Apriona*, *Cerosterna* et *Acanthoderus*."[9] The generic name in which we are interested is found on p. 621, where it has the same form as in the title, viz., *Sthelenus*, with the footnote "Nom mythologique." The subsequent history of Buquet's name so far as I have followed it is interesting.

[8] Auk, 1884: 235.

[9] Ann. Soc. Ent. France **7**: 619–636. 1859 (1860).

Scudder, quoted above, took the name *Sthenelus* from Marschall's *Nomenclator zoologieus* of 1873 as indicated by the initial "M" in his citation. Marschall, on page 245, writes "*Sthenelus*, Buquet," with a reference to the original publication, but with no explanation for the emendation. On a little further research it is found that there is no mythological character from whom Buquet might have taken the term *Sthelenus*, while *Sthenelus* was a well-known name for several ancients of importance, among them a son of Perseus who became King of Mycenae, also a King of the Ligurians whose son Cycnus was reputed to have been changed to a swan, and further one of the warriors who entered the wooden horse at the siege of Troy. It is not apparent whether Marschall recognized what we may consider Buquet's error consciously or unconsciously, but in either case he made the emendation. The matter is correctly set forth by Neave, in his *Nomenelator zoologieus*,[10] where he includes *Sthenelus* of Marschall, 1873, as a new name for *Sthelenus* Buquet, 1860. While it seems curious that neither Stejneger nor Richmond called attention to these matters in their notes on nomenclature, it is fairly certain that the circumstance must have been known to them because of their extensive knowledge and of their careful work in verification of references. In any event, *Sthenelus* of Marschall, 1873, antedated *Sthenelus* of Stejneger, 1882, so that the new name *Sthenelides* Stejneger of 1884 was in order.

[10] *Nomenclator zoologicus* **4**: 309. 1940.